

Notice of Allowability

Application No.

09/723,813

Examiner

Matthew J. Sked

Applicant(s)

ASANO ET AL.

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/30/05.
2. ☒ The allowed claim(s) is/are 1,3-5 and 8-11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

1. The objection to the claims is withdrawn in view of the amendment filed 12/30/05.
2. Applicant's arguments, filed 12/30/05, with respect to claims 1, 10 and 11 have been fully considered and are persuasive. The rejection of claims 1, 3-5 and 8-11 has been withdrawn.

Allowable Subject Matter

3. Claims 1, 3-5 and 8-11 are allowed.
4. The following is an examiner's statement of reasons for allowance: Claims 1, 10 and 11 teach a speech processing device, method and program built into a robot, for causing a robot to perform speech processing actions, comprising: a speech processing means for extracting pitch or phonemics information, a control means for processing said speech information based upon the state of the robot which is determined by an action, an emotion state, and an instinct state of the robot; wherein said emotion and instinct states are determined based on values corresponding to a plurality of states of an emotion model and instinct model, wherein the value corresponding to each state are linked in a mutually stimulating manner and varied based on said control pitch or phonemics information, wherein said speech processing means comprises a speech recognizer and wherein said robot takes actions or the emotion state of the robot is changed corresponding to reliability of the speech recognition result.

Kamiya (U.S. Pat. 6,629,242) teaches a speech processing device, method and recording medium executing a program built into a robot (col. 3, lines 63-67), comprising:

control means for controlling speech processing by said speech processing means (neural network used to determine the emotion from the speech is adapted, col. 8, lines 34-60 and robot's speech is adapted, col. 10, line 66 to col. 11, line 4), based on a state of said robot; wherein the state is determined by an action, an emotion state and an instinct state of the robot (adaptation of the neural network is subjected to an evaluation of a decided action (instinct) that is based on its current emotion state and how this action is judged by the user, col. 8, lines 34-60);

wherein said emotion and instinct states are determined on the basis of values corresponding to a plurality of states of an emotion model and an instinct model, respectively; wherein the value corresponding to each state within the emotion model and within the instinct model are linked to a mutually stimulating manner (relationships exist between emotional model and corresponding patterns of behavior, col. 11, lines 8-23); and

wherein said voice processing means comprises voice recognizing means for recognizing the voice input (sound/voice detection unit, col. 6, lines 9-15).

Petrushin (U.S. Pat. 2002/0194002A1) teaches a system for detecting emotion in speech that extracts the pitch from the incoming speech to classify the emotion of the speaker (paragraph 42).

None of the prior art on record teaches wherein said robot takes actions corresponding to a reliability of the speech recognition results output from said speech recognizing means, or the emotion state of said robot is changed based on said reliability. It would not have been obvious to one of ordinary skill in the art at the time of invention to modify the systems of the prior art to arrive at the Applicant's invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mizokawa (U.S. Pat. Pub. 2002/0069036A1) teaches an interactive system with emotion control.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MS
02/27/06


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600